

EH49 Series



ECLIPTEK[®]
CORPORATION

- RoHS Compliant (Pb-Free)
- Ceramic SMD package
- 1.8V supply voltage
- LVCMOS output
- Stability to ± 20 ppm
- Available on tape and reel



NOTES

ELECTRICAL SPECIFICATIONS

Frequency Range		2.500MHz to 133.000MHz
Operating Temperature Range		0°C to 70°C or -40°C to 85°C
Storage Temperature Range		-55°C to 125°C
Supply Voltage (V_{DD})		1.8V _{DC} $\pm 5\%$
Input Current (No Load)	2.500MHz to 25.000MHz	3.5mA Maximum
	25.001MHz to 75.000MHz	4mA Maximum
	75.001MHz to 133.000MHz	5mA Maximum
Frequency Tolerance / Stability	Inclusive of all conditions: Calibration Tolerance at 25°C, Frequency Stability over the Operating Temperature Range, Supply Voltage Change, Output Load Change, First Year Aging at 25°C, 260°C Reflow, Shock, and Vibration	± 100 ppm Maximum ± 50 ppm Maximum ± 25 ppm Maximum ± 20 ppm Maximum
Output Voltage Logic High (V_{OH})		90% of V_{DD} Minimum $I_{OH} = -8$ mA
Output Voltage Logic Low (V_{OL})		10% of V_{DD} Maximum $I_{OL} = +8$ mA
Rise Time / Fall Time	2.500MHz to 50.000MHz 20% to 80% of Waveform	6 nSeconds Maximum
	50.001MHz to 75.000MHz 20% to 80% of Waveform	4 nSeconds Maximum
	75.001MHz to 133.000MHz 20% to 80% of Waveform	2 nSeconds Maximum
Load Drive Capability		15pF Maximum
Duty Cycle	at 50% of Waveform	50 ± 10 (%) (Standard) or 50 ± 5 (%) (Optional)
Tri-State Input Voltage	$V_{IH} : \geq 90\%$ of V_{DD} or No Connection $V_{IL} : \leq 10\%$ of V_{DD}	Enables Output Disables Output: High Impedance
Standby Current	Pin 1 = Ground	10 μ A Maximum
Aging (at 25°C)		± 5 ppm / year Maximum
Start Up Time		10mSeconds Maximum
Period Jitter: Absolute		± 125 pSec Maximum

MANUFACTURER
ECLIPTEK CORP.

CATEGORY
OSCILLATOR

SERIES
EH49

PACKAGE
CERAMIC

VOLTAGE
1.8V

CLASS
057C

REV. DATE
06/09

PART NUMBERING GUIDE

EH49 00 ET TS - 24.000M TR

FREQUENCY TOLERANCE / STABILITY

00 = ±100ppm Maximum (Standard)
 45 = ±50ppm Maximum
 25 = ±25ppm Maximum
 20 = ±20ppm Maximum

OPERATING TEMP. RANGE

Blank = 0°C to 70°C or
 ET = -40°C to 85°C

DUTY CYCLE

Blank = 50 ±10% (Standard)
 T = 50 ±5%

AVAILABLE OPTIONS

Blank = Bulk (Standard)
 TR = Tape and Reel

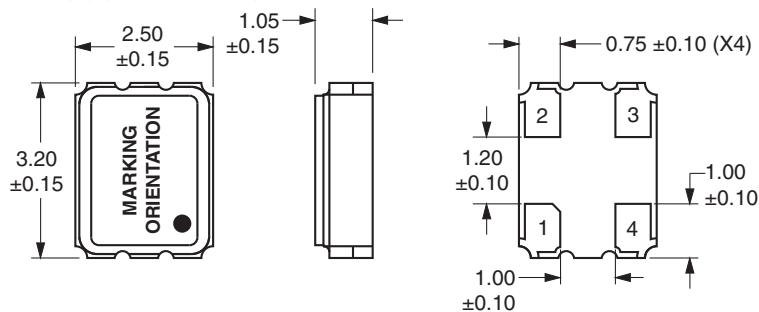
FREQUENCY

OUTPUT CONTROL FUNCTION

TS = Tri-State (High Impedance)

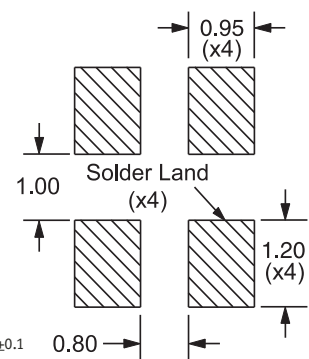
MECHANICAL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS



SUGGESTED SOLDER PAD LAYOUT

ALL DIMENSIONS IN MILLIMETERS



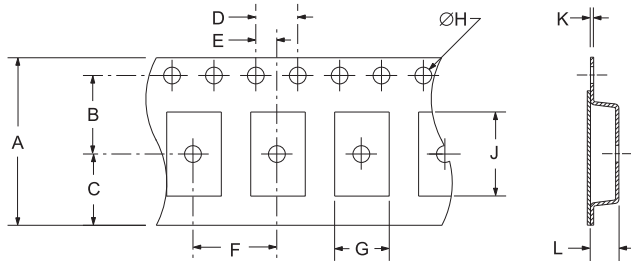
Tolerances = ±0.1

Pin 1: Tri-State
 Pin 2: Case Ground

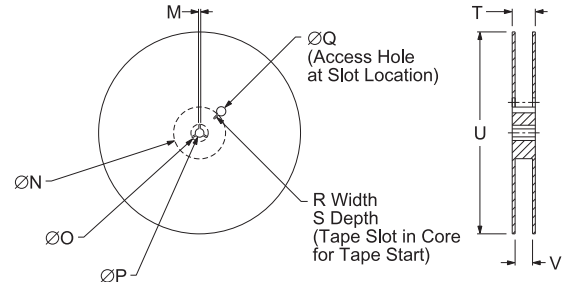
Pin 3: Output
 Pin 4: Supply Voltage

TAPE AND REEL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS



REEL	A	B	C	D	E
	12.0 ±0.3	5.5 ±0.05	4.75 ±0.10	4.0 ±0.1	2.0 ±0.05
F	G	H	J	K	L
4.0 ±0.1	A0*	1.5 +0.1 -0.0	B0*	0.6 MAX	K0*



REEL	M	N	O	P	Q
	1.5 MIN	50 MIN	20.2 MIN	13.0 ±0.2	40 MIN
R	S	T	U	V	QTY/REEL
2.5 MIN	10 MIN	18.4 MAX	180 MAX	12.4 +2 -0	1,000

*Compliant to EIA 481A

ENVIRONMENTAL/MECHANICAL SPECIFICATIONS

Characteristic	Specification
ESD Susceptibility	MIL-STD-883, Method 3015, Class 1, HBM: 1500V
Fine Leak Test	MIL-STD-883, Method 1014, Condition A
Flammability	UL94-V0
Gross Leak Test	MIL-STD-883, Method 1014, Condition C
Mechanical Shock	MIL-STD-883, Method 2002, Condition B
Moisture Resistance	MIL-STD-883, Method 1004
Moisture Sensitivity	J-STD-020, MSL 1
Resistance to Soldering Heat	MIL-STD-202, Method 210, Condition K
Resistance to Solvents	MIL-STD-202, Method 215
Solderability	MIL-STD-883, Method 2003
Temperature Cycling	MIL-STD-883, Method 1010, Condition B
Vibration	MIL-STD-883, Method 2007, Condition A

MARKING SPECIFICATIONS

Line 1: EPO
 Line 2: XXXXX
 Eclipitek Manufacturing Identifier

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EH49	CERAMIC	1.8V	OS7C	06/09